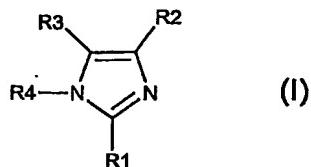


THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. Use of a therapeutically effective amount of a compound of formula I:



wherein:

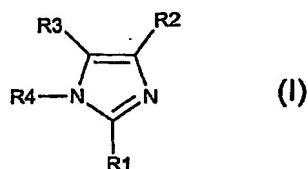
R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol; lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

to inhibit neoplastic cell growth or proliferation in a mammal.

2. Use of a therapeutically effective amount of a compound of formula I:



wherein:

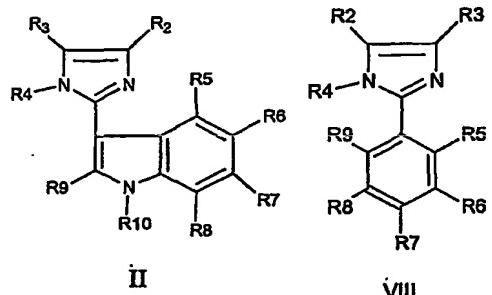
R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

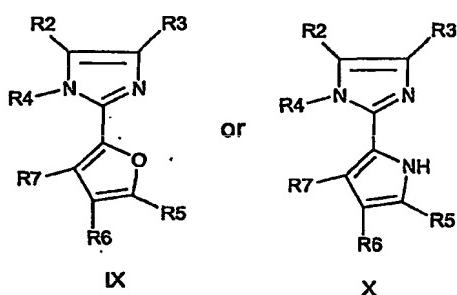
R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

in the treatment of cancer in a mammal in need thereof.

3. The use according to claim 1 or 2, wherein said compound is selected from the group of compounds of structural formulae:



or



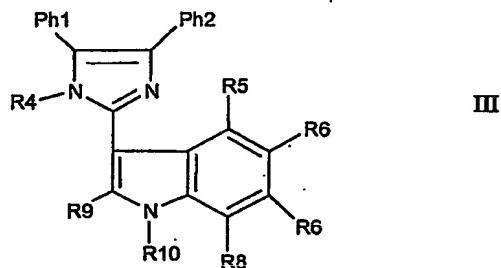
or a salt thereof, wherein:

R₂ and R₃ are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R₂ and R₃ when taken together along with the carbon atoms they are attached form aryl or substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

R₄, R₅, R₆, R₇, R₈ and R₉ are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl; and

R₁₀ is H, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl, -CH₂-aryl, or -CH₂-heteroaryl.

4. The use according to claim 1 or 2, wherein said compound has formula III:

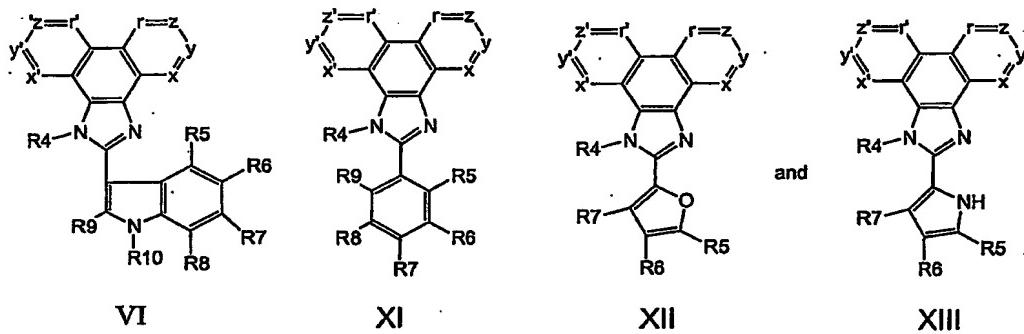


or a salt thereof, wherein:

Ph1 and Ph2 are independently selected from phenyl and substituted phenyl;

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;
 R10 is H, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or acyl.

5. The use according to claim 1 or 2, wherein said compound is selected from the group of compounds of structural formulae:



or a salt thereof, wherein:

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

x is CR11 or N;

y is CR12 or N;

z is CR13 or N;

r is CR14 or N;

x' is CR15 or N;

y' is CR16 or N;

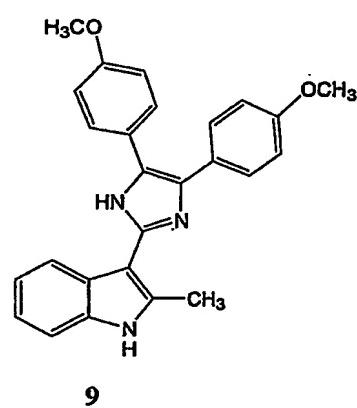
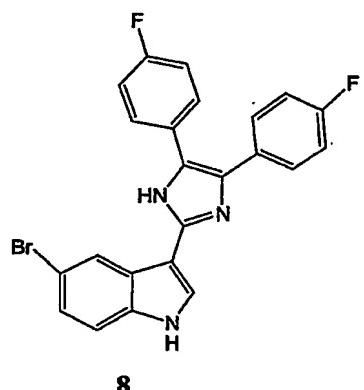
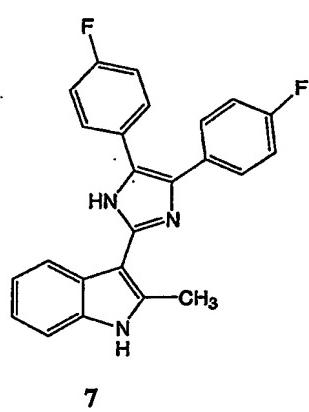
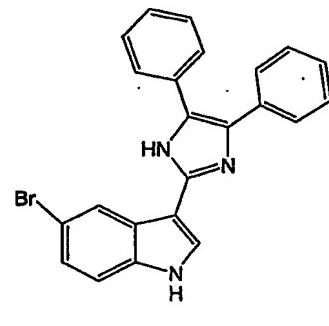
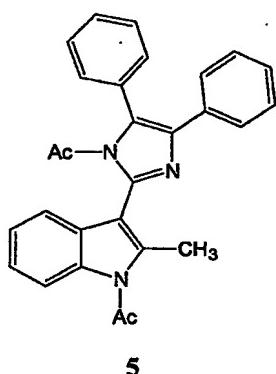
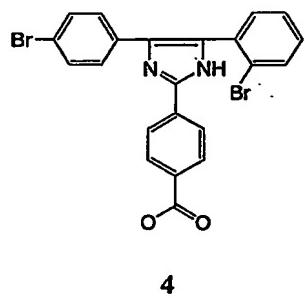
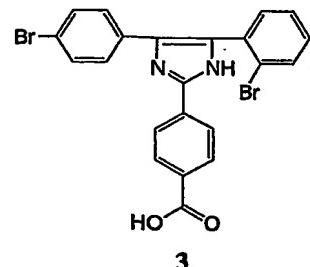
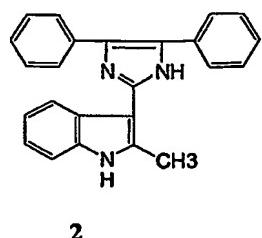
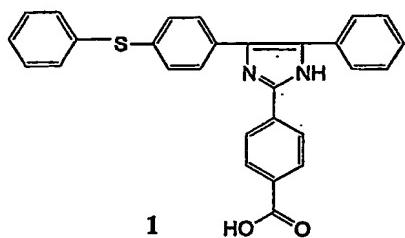
z' is CR17 or N;

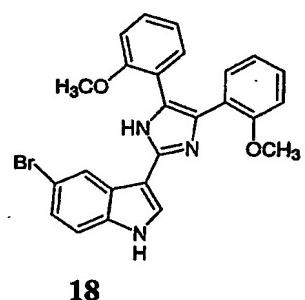
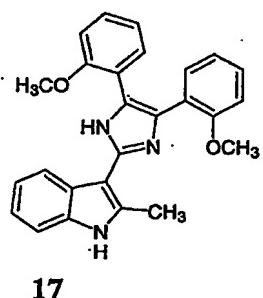
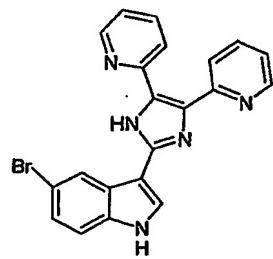
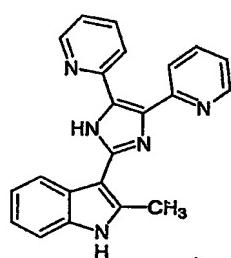
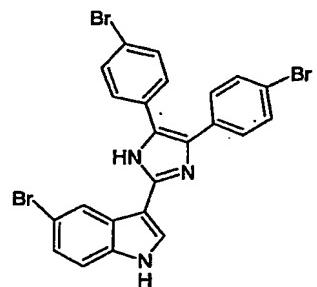
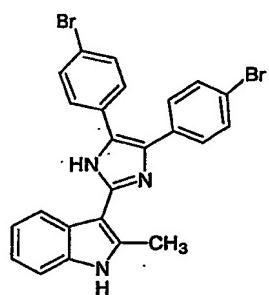
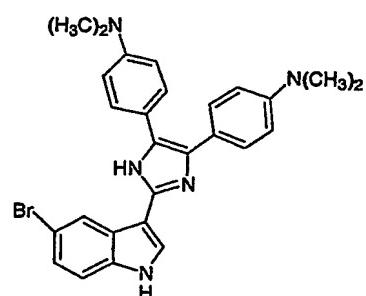
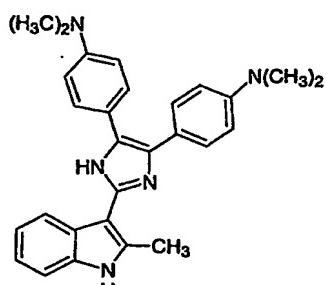
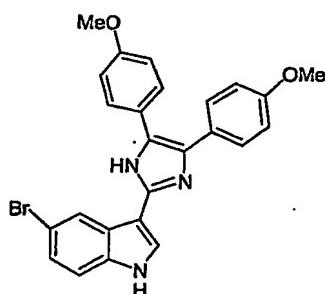
r' is CR18 or N;

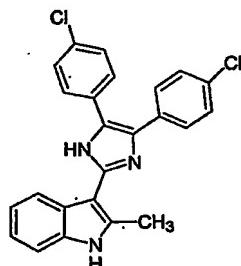
R10 is H, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl.

R11, R12, R13, R14, R15, R16, R17 and R18 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, or cyano.

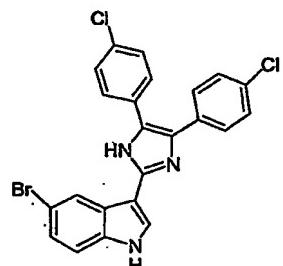
6. The use according to claim 1 or 2, wherein said compound is selected from the group of compounds:



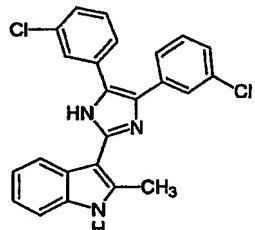




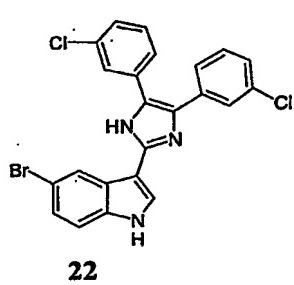
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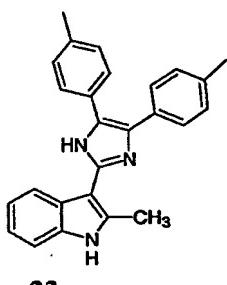
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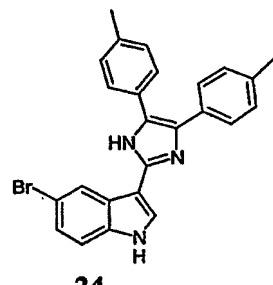
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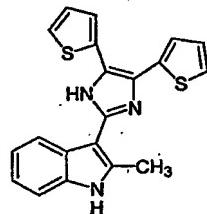
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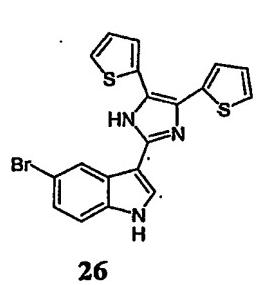
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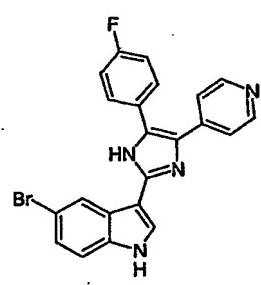
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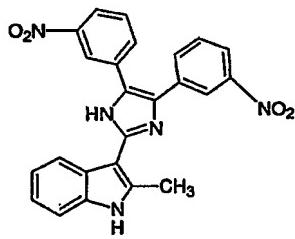
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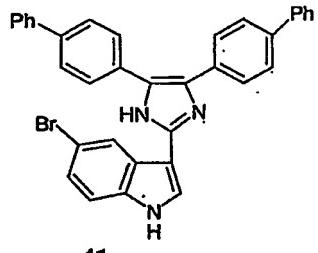
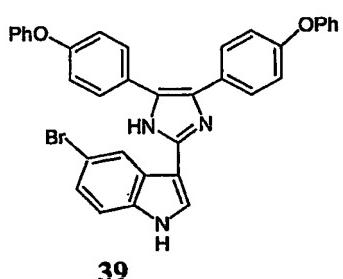
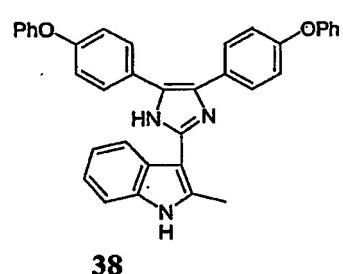
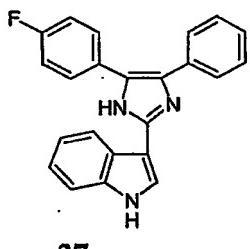
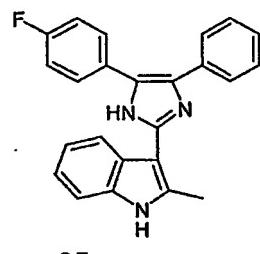
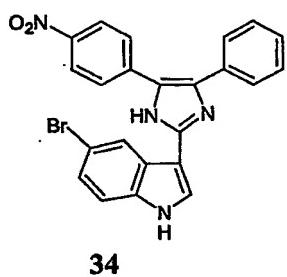
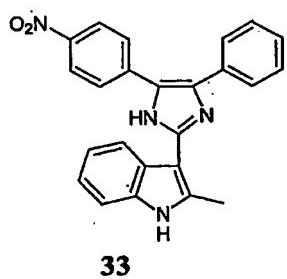
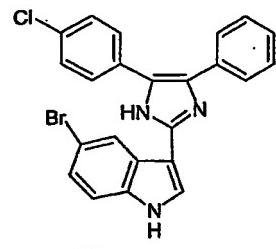
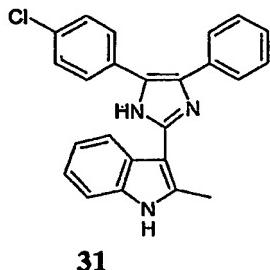
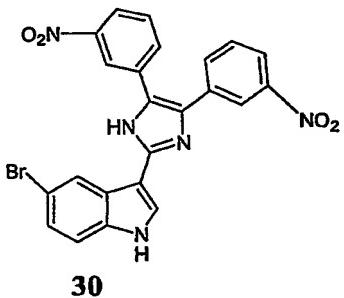
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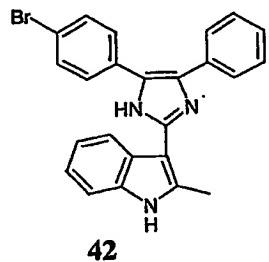


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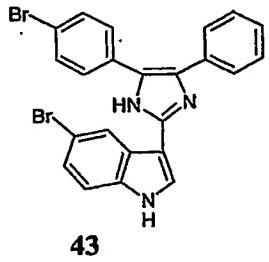


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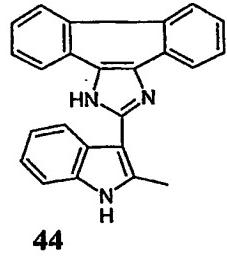




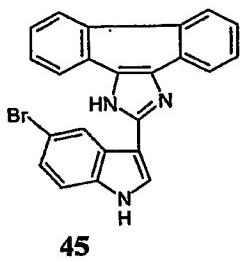
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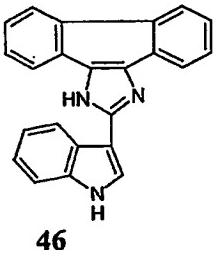
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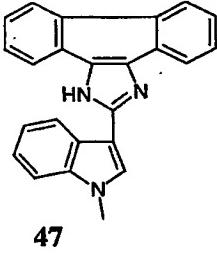
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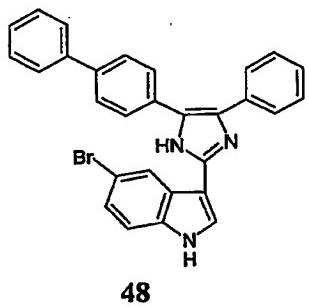
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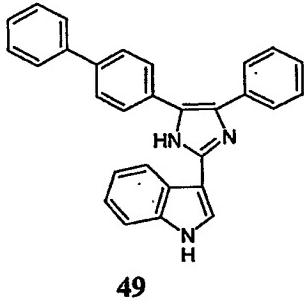
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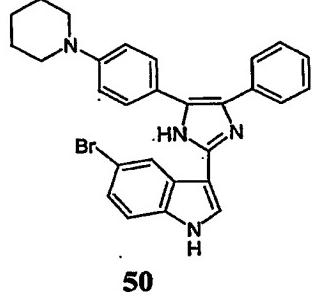
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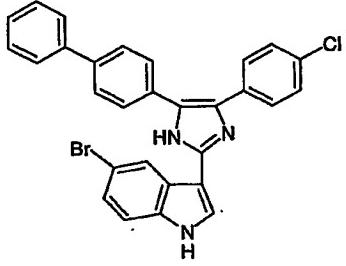
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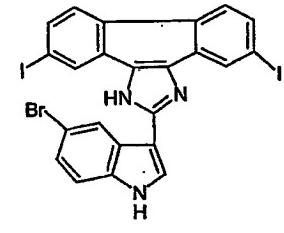
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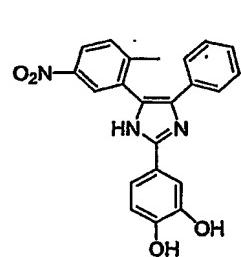
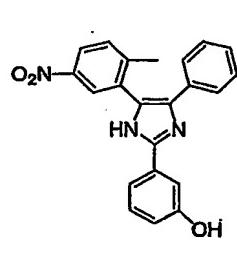
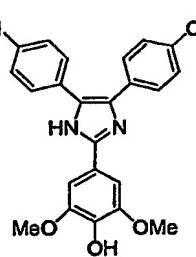
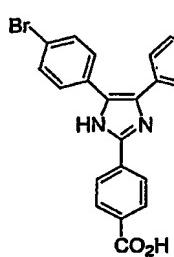
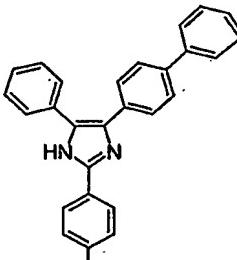
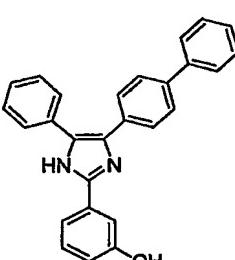
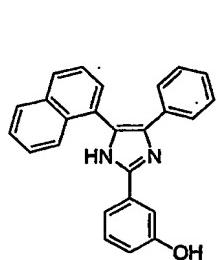
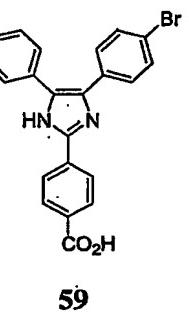
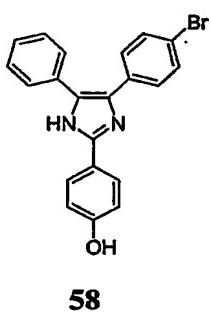
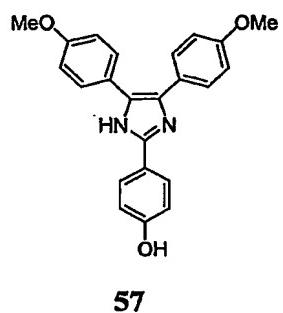
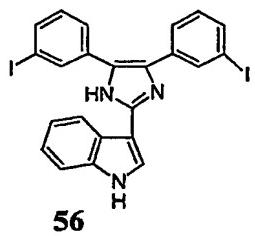
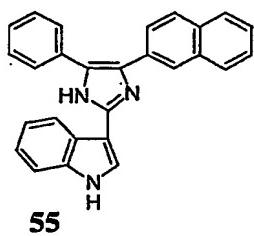
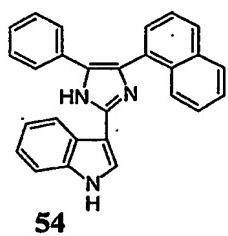
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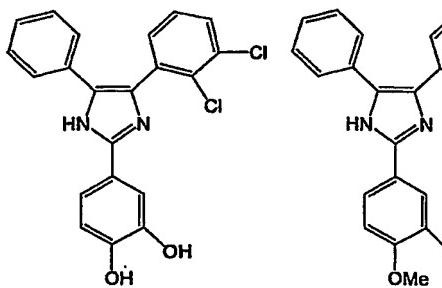


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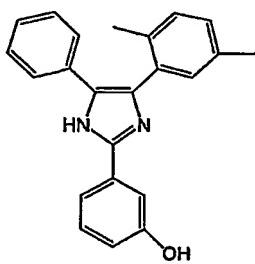
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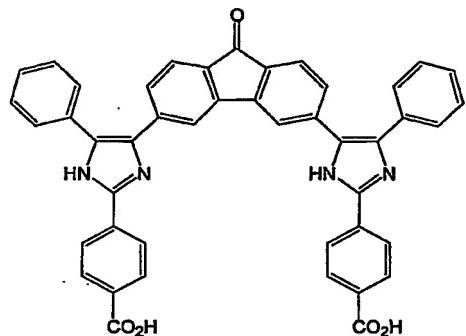


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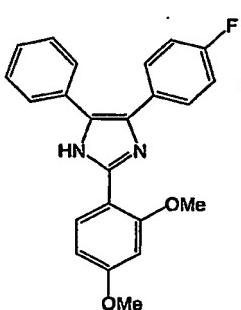


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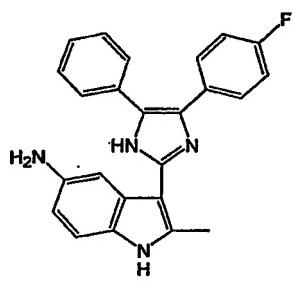


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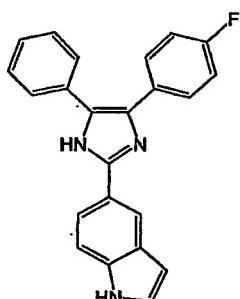
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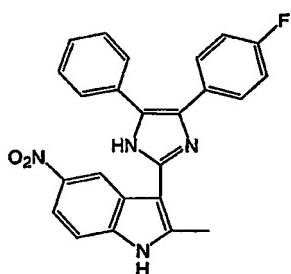
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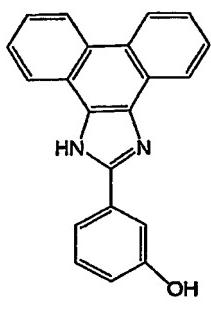
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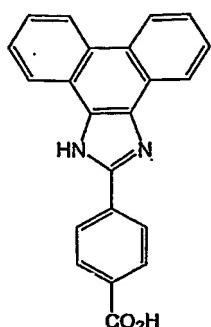
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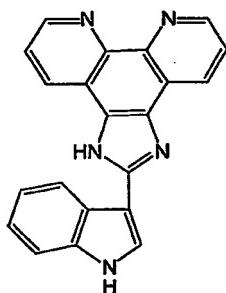
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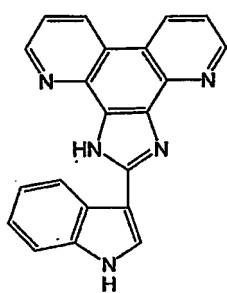
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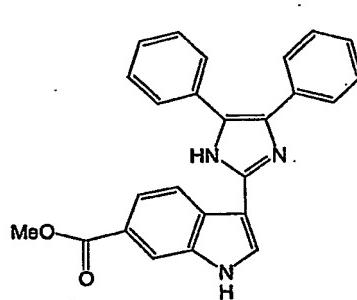
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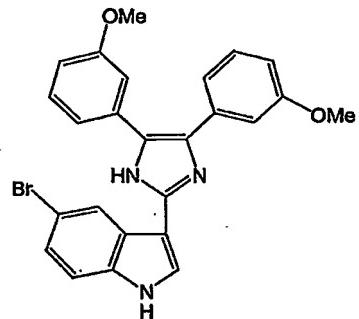
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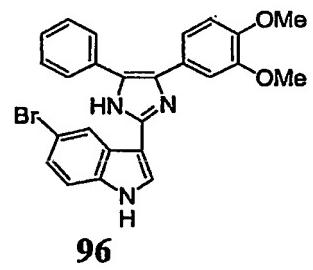
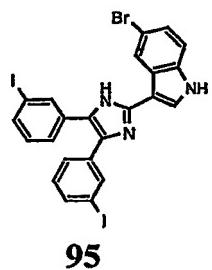
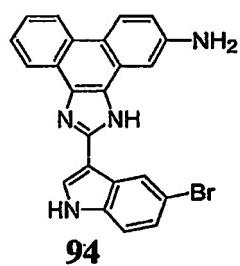
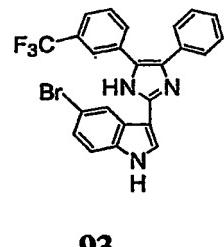
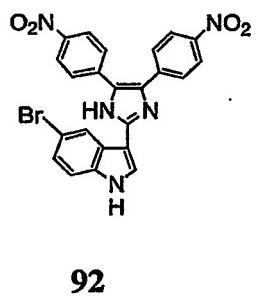
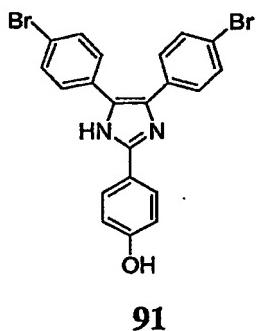
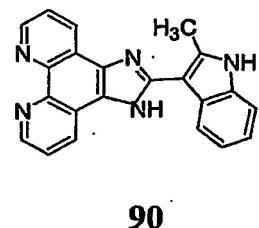
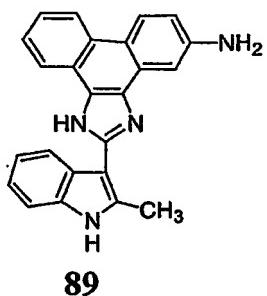
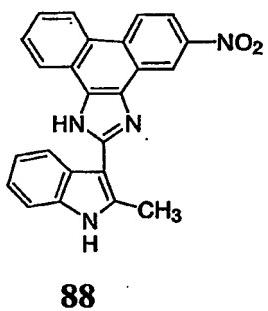
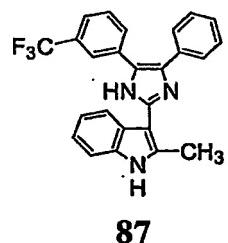
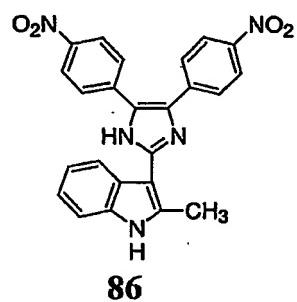
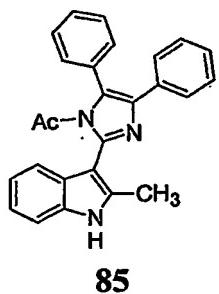
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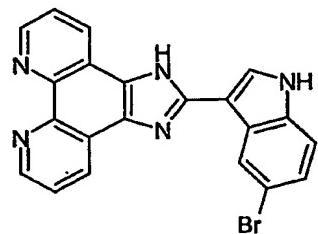
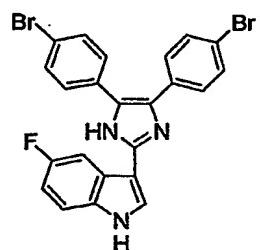
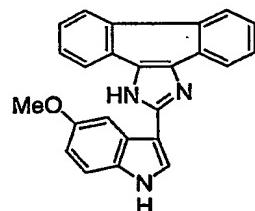
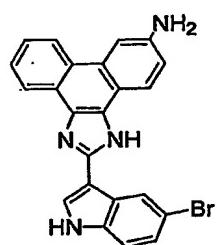
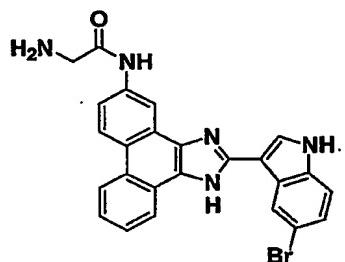
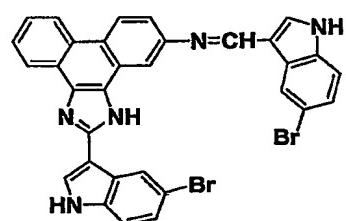
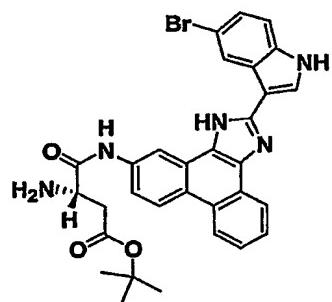
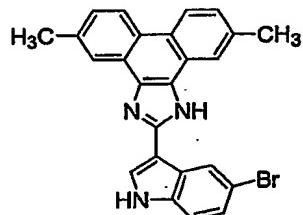
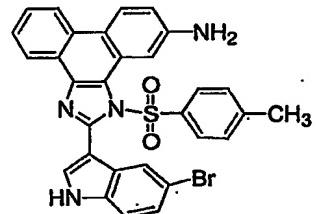


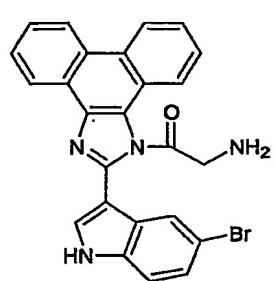
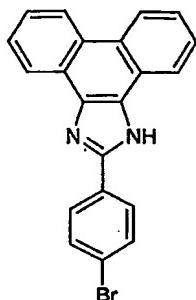
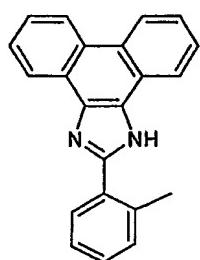
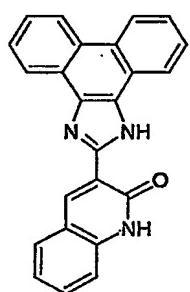
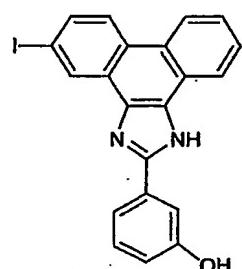
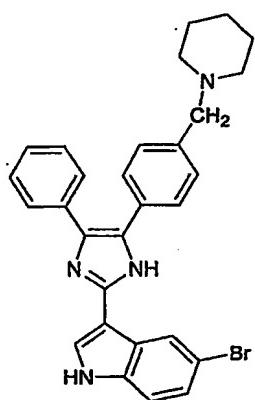
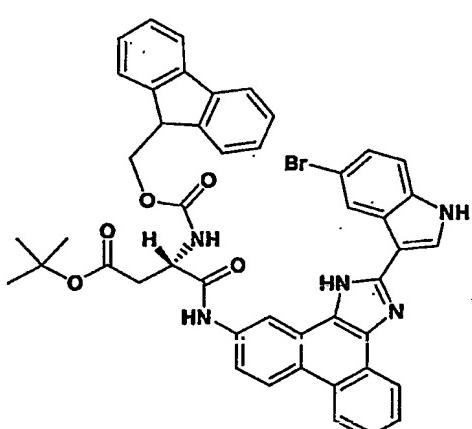
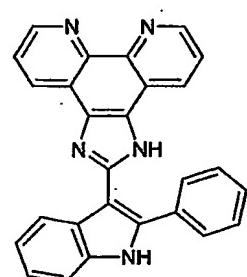
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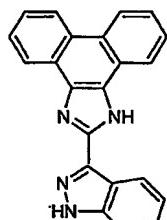
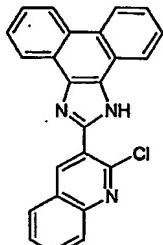
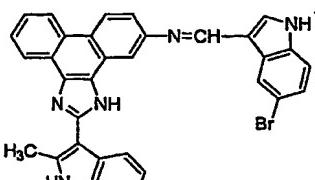
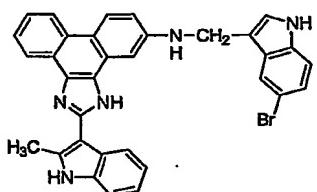
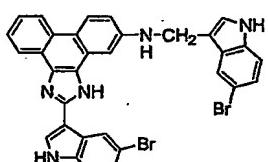
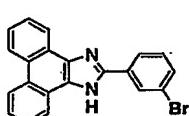
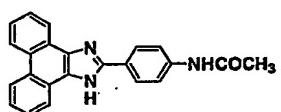
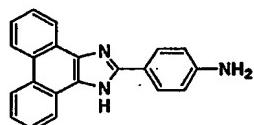
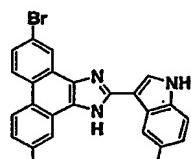
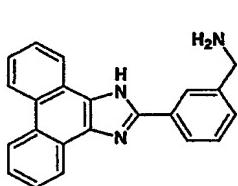
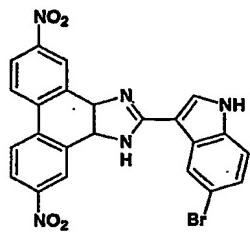


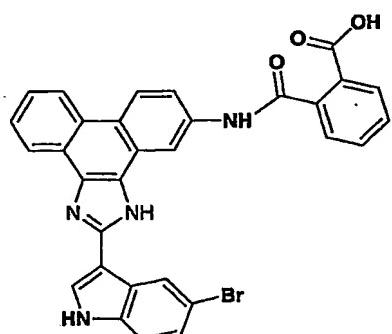
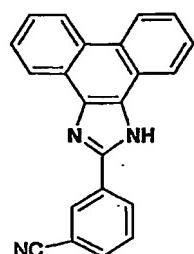
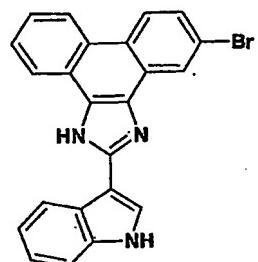
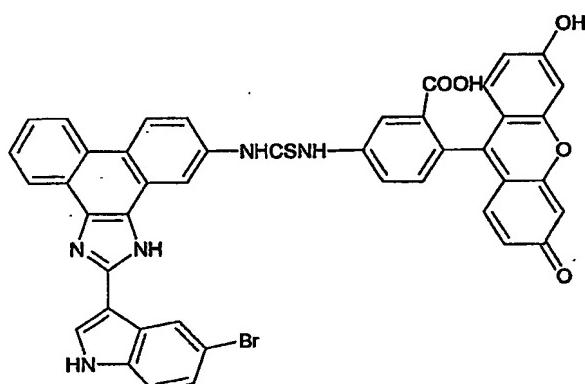
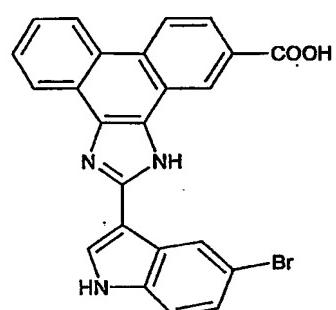
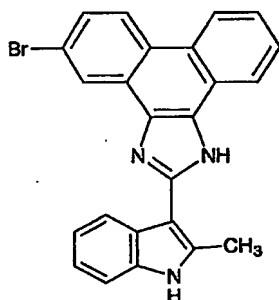
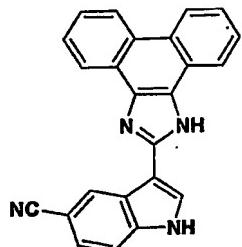
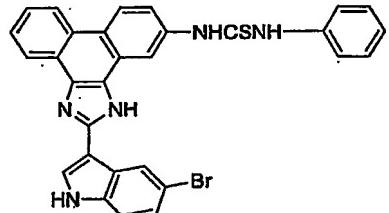
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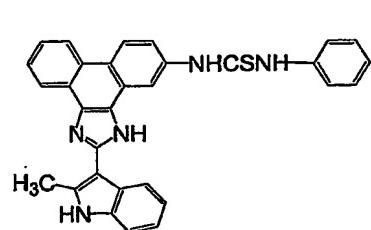
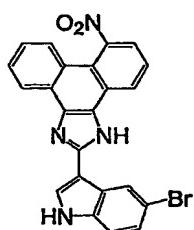
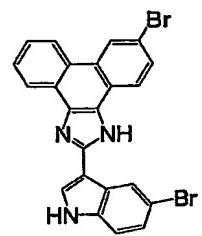
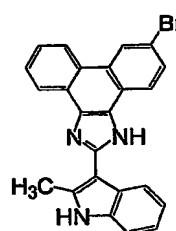
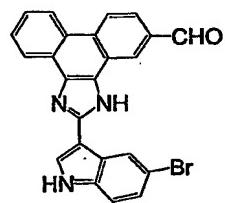
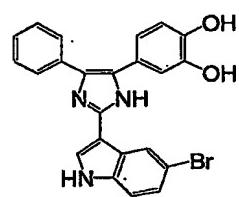
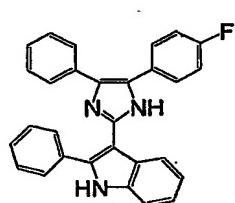
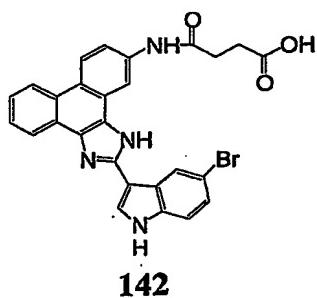
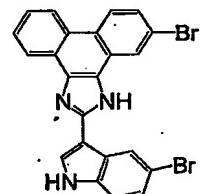
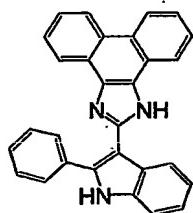


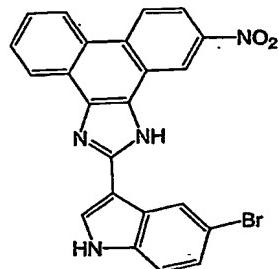
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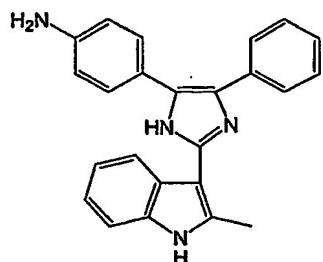
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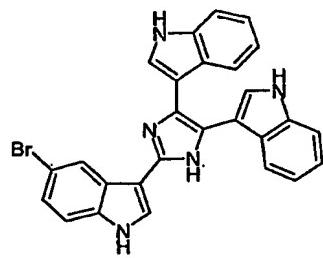
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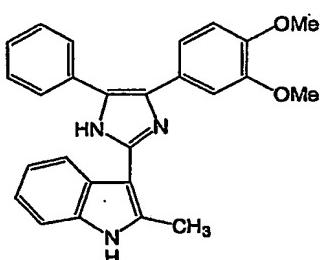
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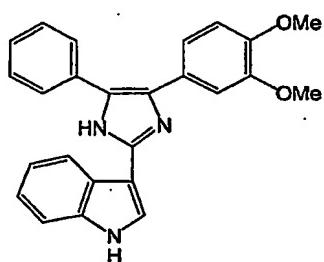
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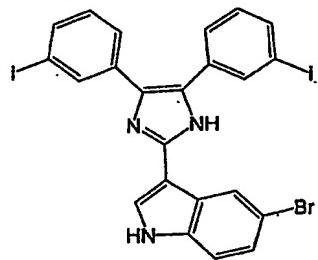
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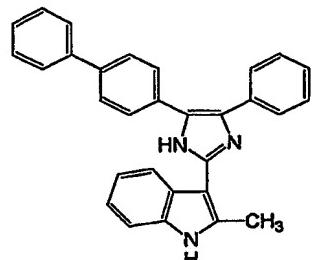
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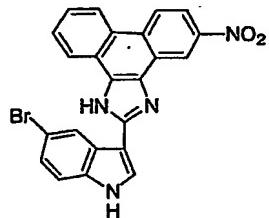
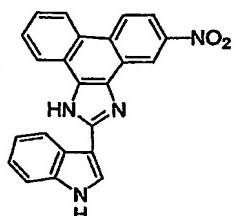
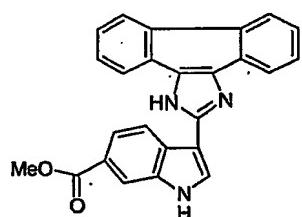
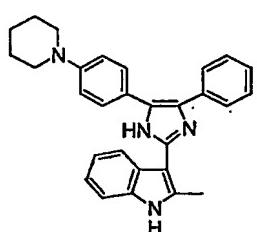
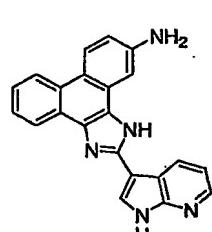
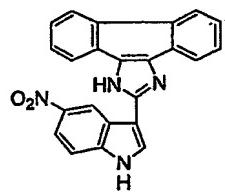
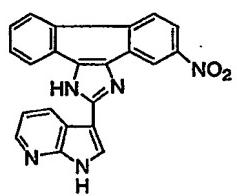
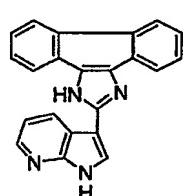
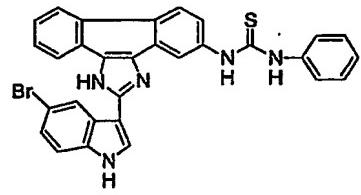
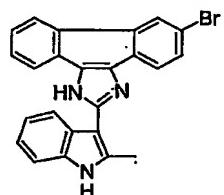
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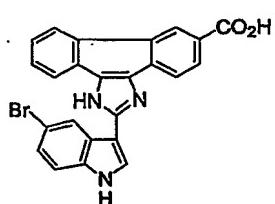


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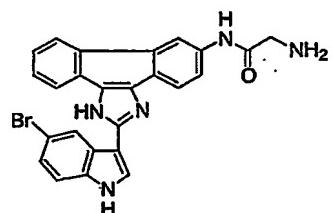


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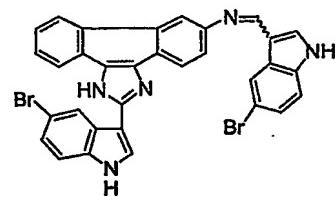
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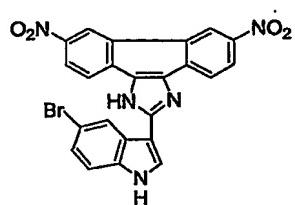
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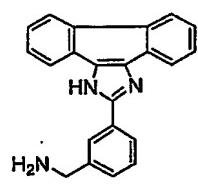
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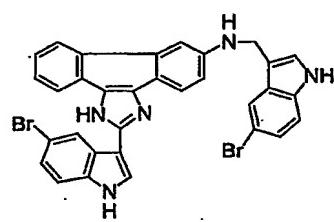
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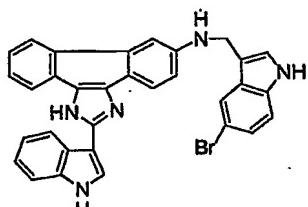
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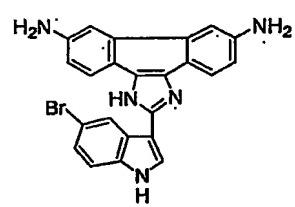
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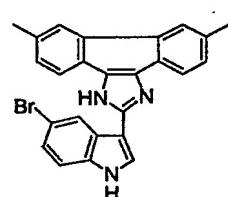
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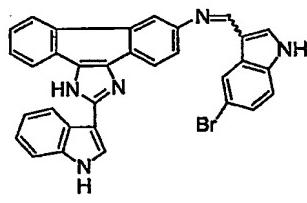
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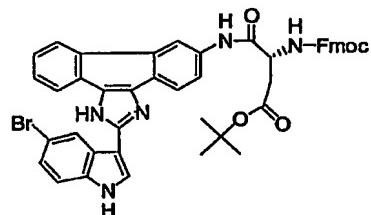
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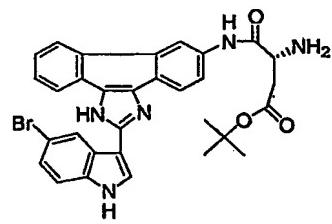
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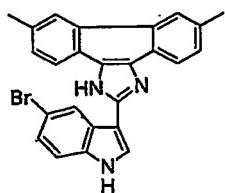
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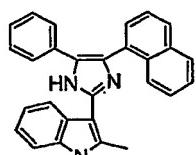
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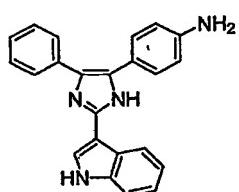
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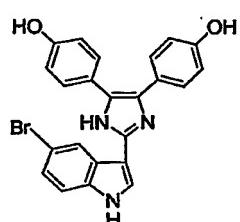
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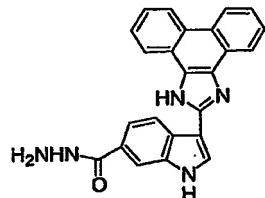
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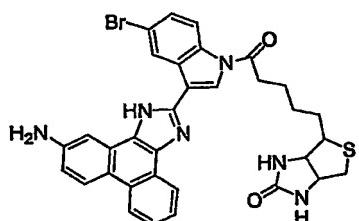
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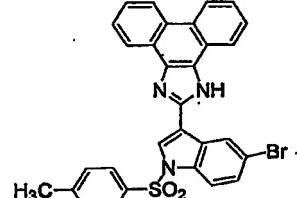
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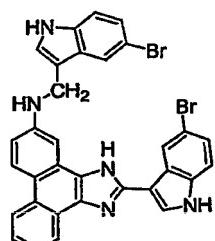
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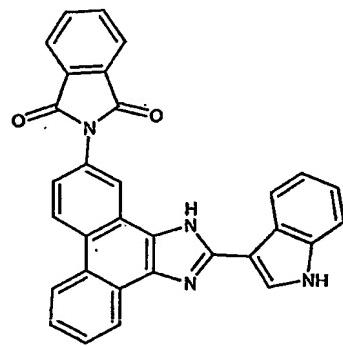
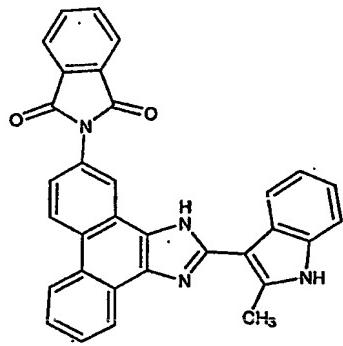
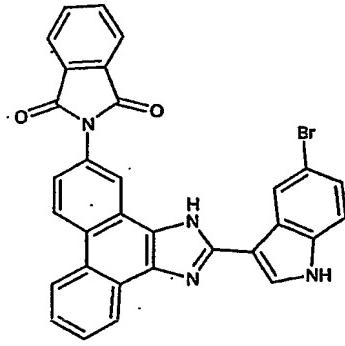
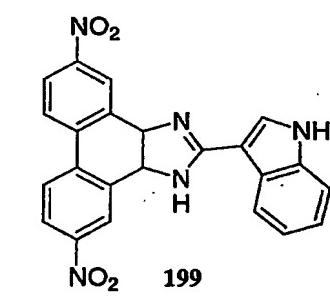
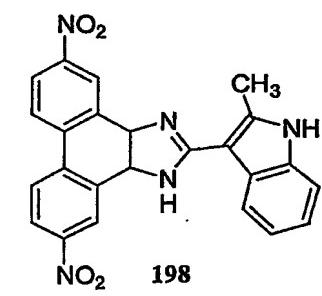
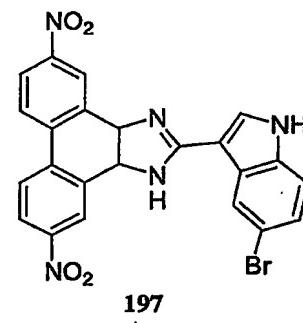
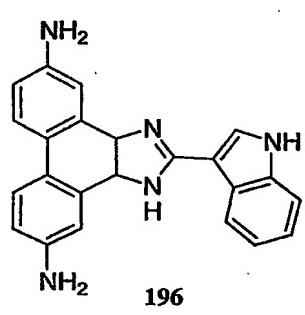
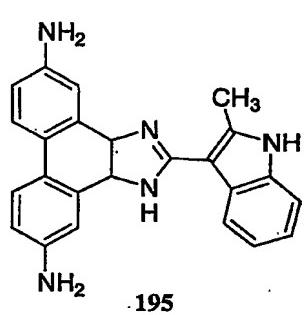
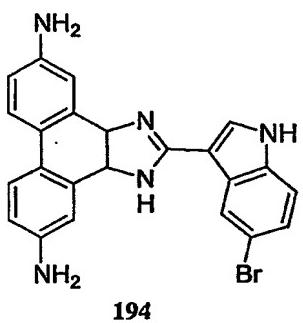
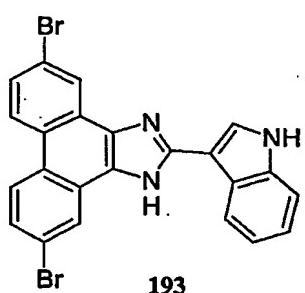
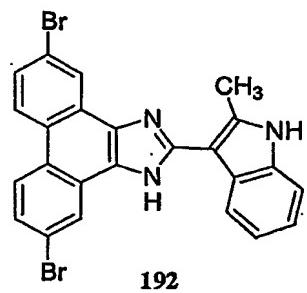
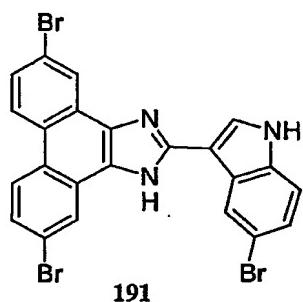
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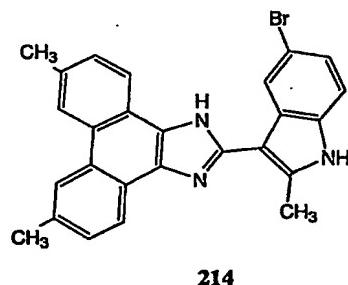
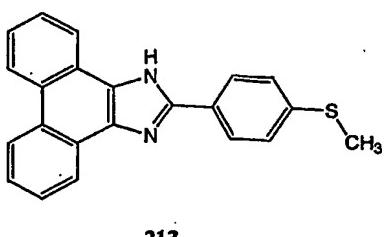
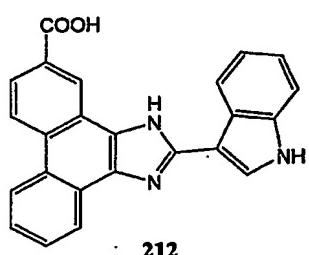
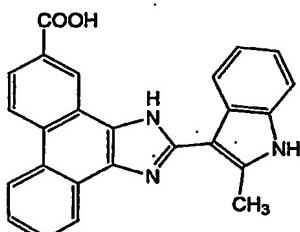
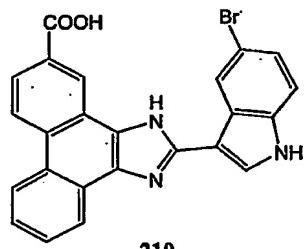
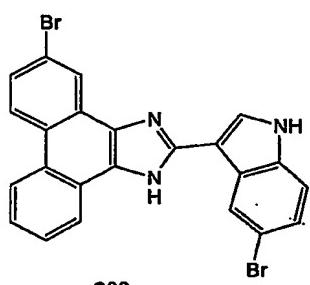
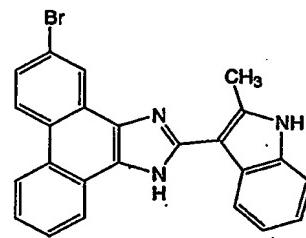
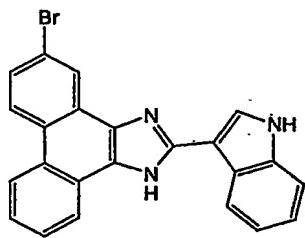
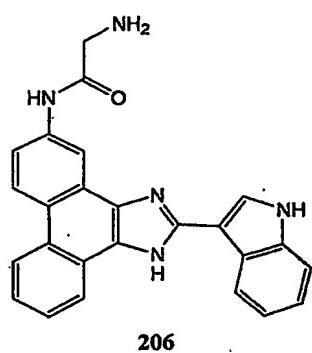
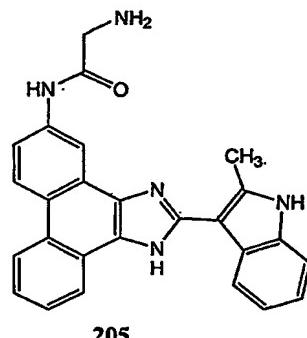
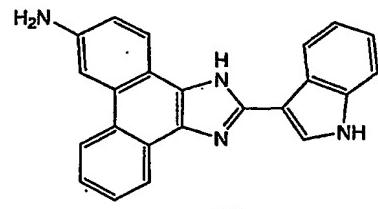
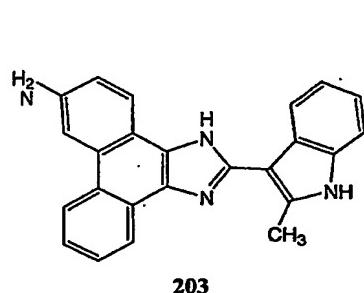


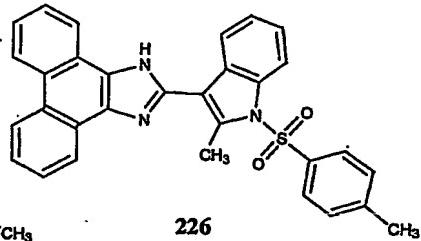
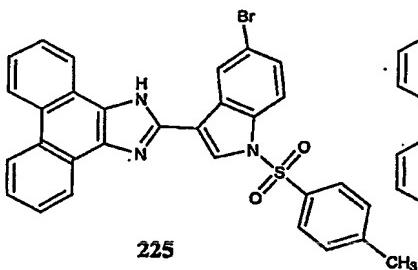
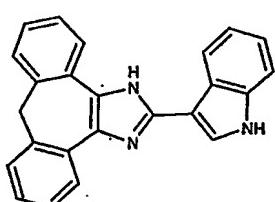
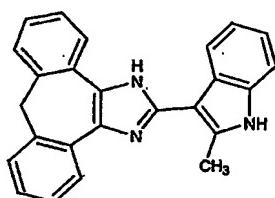
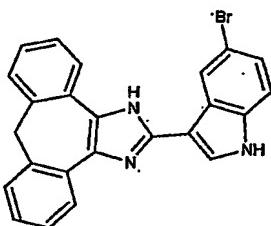
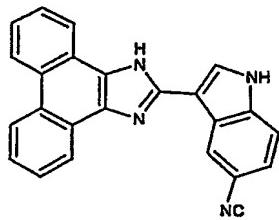
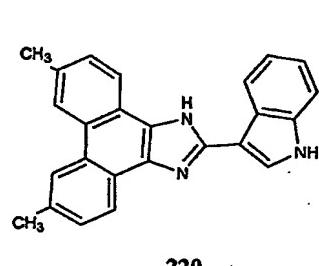
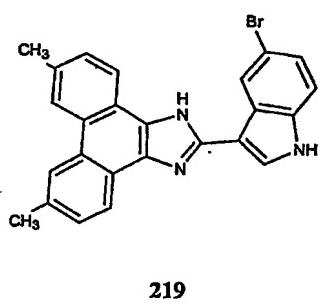
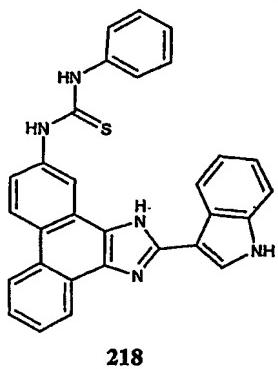
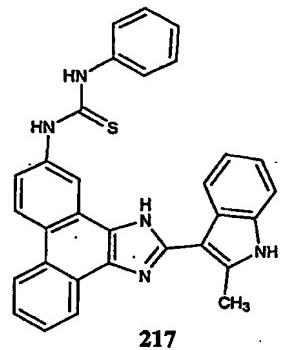
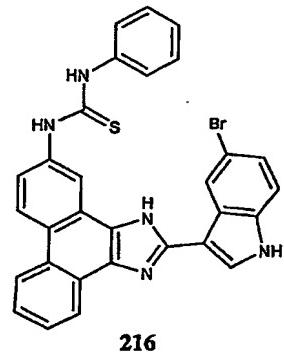
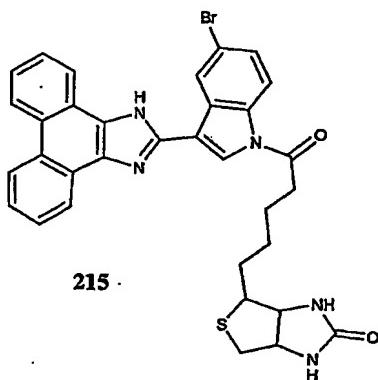
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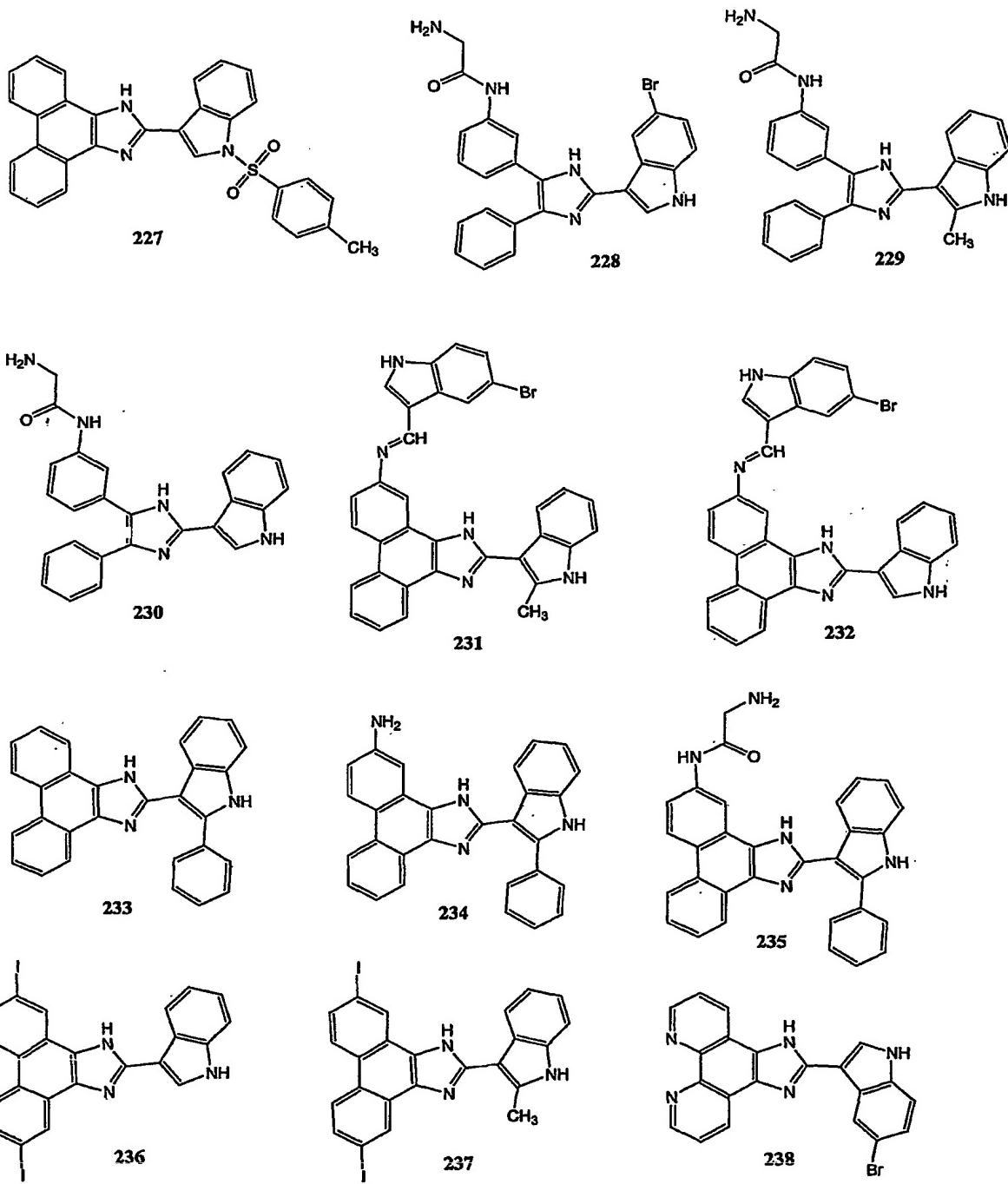


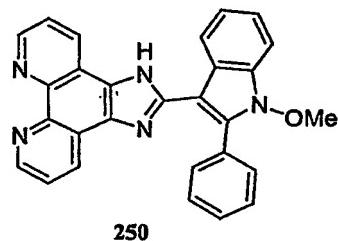
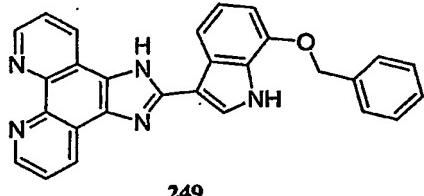
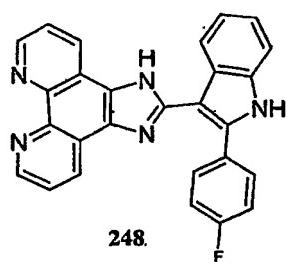
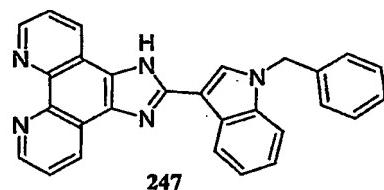
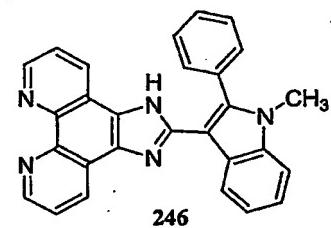
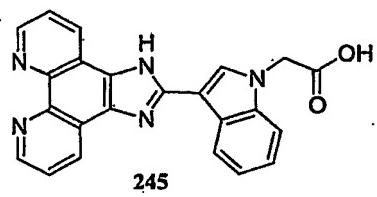
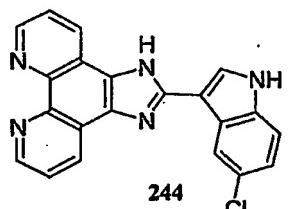
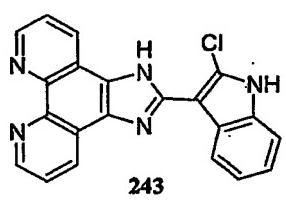
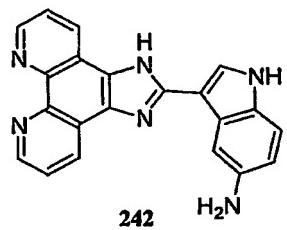
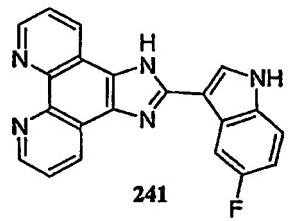
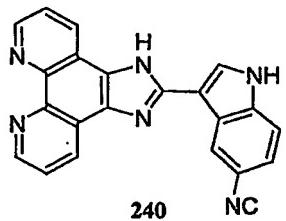
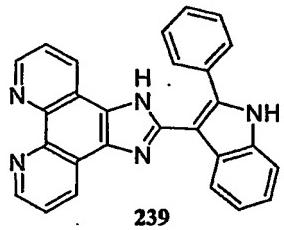
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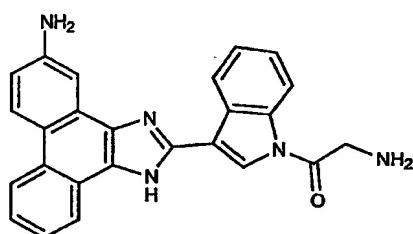
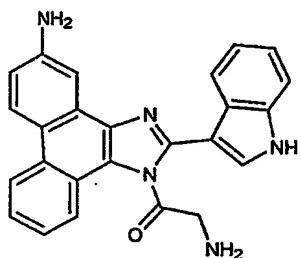
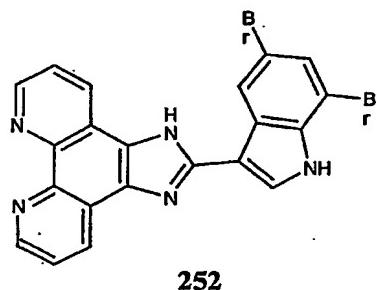
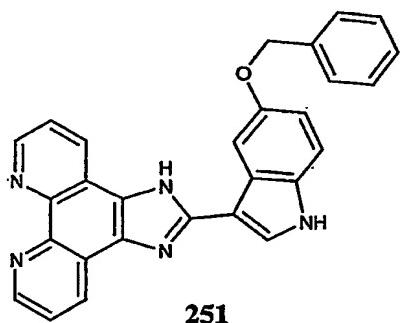






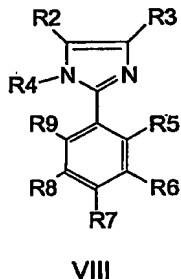




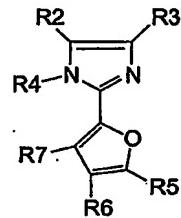


7. The use according to claim 1, wherein said neoplastic cell growth is associated with a solid tumour.
8. The use according to claim 2, wherein said cancer is solid tumour.
9. The use according to claim 1, wherein said neoplastic cell growth is associated with a cancer selected from the group of: breast cancer, central nervous system cancer, cervical cancer, colon cancer, liver cancer, lung cancer, melanoma, ovarian cancer, pancreatic cancer, prostate cancer, renal cancer, and leukemia.
10. The use according to claim 2, wherein said cancer is selected from the group of: breast cancer, central nervous system cancer, cervical cancer, colon cancer, liver cancer, lung cancer, melanoma, ovarian cancer, pancreatic cancer, prostate cancer, renal cancer, and leukemia.

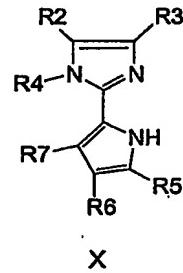
11. The use according to any one of claims 1 to 10, wherein said compound is formulated for administration in combination with one or more anti-cancer agents(s).
12. The use according to any one of claims 1 to 11, wherein said compound is formulated for systemic administration.
13. A compound selected from the compounds of structural formulae:



or



or

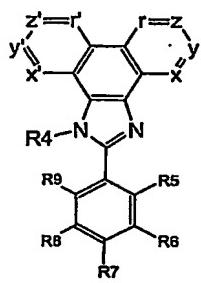


wherein:

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form a aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

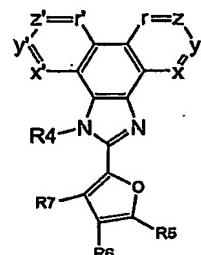
R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.

14. A compound selected from the compounds of structural formulae:

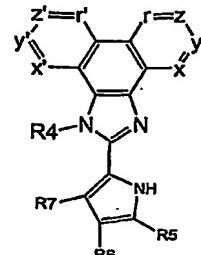


XI

Or



XII



XIII

or a salt thereof, wherein:

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

x is CR11 or N;

y is CR12 or N;

z is CR13 or N;

r is CR14 or N;

x' is CR15 or N;

y' is CR16 or N;

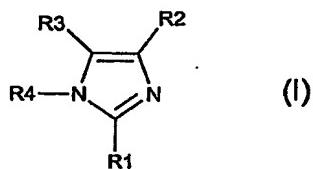
z' is CR17 or N;

r' is CR18 or N;

R11, R12, R13, R14, R15, R16, R17 and R18 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido,

carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, or cyano.

15. Use of a compound of formula I:



wherein:

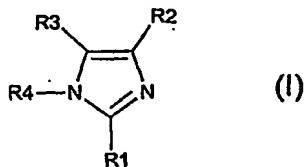
R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

in the manufacture of a medicament for the inhibition of neoplastic cell growth or proliferation.

16. Use of a compound of formula I:



wherein:

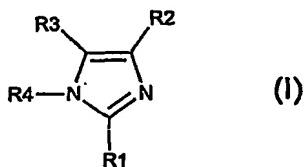
R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

in the manufacture of a medicament for the treatment of cancer.

17. An anti-cancer composition comprising a carrier, diluent or excipient and an effective amount of a compound of formula I:



or a salt thereof,

wherein:

R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or $-S(O)_{0-2}R$ wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.